

REMARKS/ARGUMENTS

This letter is responsive to the Office Action dated October 5, 2004. This response is accompanied by a one month extension of time. Therefore please consider this response as timely filed.

In the Office Action, the Examiner has stated that the preambles of the claims need to be amended to include "A computer implemented method" or similar language. Furthermore, the Examiner has stated that the bodies of the claims must include a structural / functional interrelationship that is directed to the technological arts.

The applicant has amended the independent claims, namely claims 1, 8 and 21, to include the Examiner's suggested language for the preamble. Furthermore, these claims have been amended to explicitly include computer structure that is relevant to carrying out the claimed method.

In the Office Action, the Examiner has rejected claims 1-21 under 35 U.S.C. 101 as not being directed to a useful, concrete and tangible result. The applicant has amended claim 1 to include step (i) which is the step of identifying behavior of the financial instrument as being aberrant if the number of aberrant flags is greater than zero. The applicant submits that the identification of the behavior of the financial instrument as being aberrant under selected conditions is a useful, concrete and tangible result in accordance with 35 U.S.C. 101. In particular, the identification of a financial instrument as trading in an aberrant manner is an indication that research should be conducted to determine whether the instrument is likely to increase or decrease in value. The applicant submits that the identifying step is already present in claims 8 and 21 of the present application. Accordingly, the applicant submits that independent claims 8 and 21, and all the dependent claims in the application, which depend at least indirectly from claims 1 or 8, are in accordance with 35 U.S.C. 101.

In the Office Action, the Examiner has rejected claims 1-21 under 35 U.S.C. 103(a) as being obvious in view of the combined teachings of Bay, Jr. and Li.

Claim 1 claims at step c) providing the average and standard deviation of the price, volume and number of transactions during each of the time periods.

The Examiner has stated that Bay, Jr. teaches to calculate the average and standard deviation of the price, volume and number of transactions during each of the time periods. The Examiner specifically referred to the text at column 3, line 52-column 4, line 8 of Bay, Jr. as disclosing these features.

In the text cited by the Examiner, Bay, Jr. discloses only the use of the average historical market volume, and does not disclose anything about the average price or the average number of transactions. Furthermore, in the text cited by the Examiner, Bay, Jr. does not disclose anything at all about the standard deviations of any of the price, volume and number of transactions.

If the Examiner is of the belief that the Bay, Jr.'s use of the letter sigma is intended to indicate a standard deviation, the applicant submits that this is not what is conveyed by the rest of the text. The sigma used in the text at column 3, line 53 is a capital sigma, which is usually used to denote a sum, rather than a standard deviation, which is normally denoted by a lower case sigma. Furthermore, the rest of the cited text explains that what displayed in that region of Figure 1 are principally totals (see column 3, lines 65-68).

With respect to price, the applicant further submits that Bay, Jr. does not teach or suggest providing the average or standard deviation of the price anywhere in the entirety of the '452 patent. The only price information that he teaches to display includes the opening price, the closing price and the high and low prices for the selected time periods.

With respect to trading volume, Bay, Jr. states at column 3, lines 24-26 and 60 that he uses the average historical volume, which he obtains by counting the number of transactions, rather than by using true volume data (see column 4, lines 47-51). He then goes on to explain that for stocks the true volume is used, since it is reported by the exchange. Thus, for commodities other than stocks, he provides what he considers to be average volume data only due to lack of access to true volume data. For stocks, he provides true volume data, not average volume data.

Thus, the applicant submits that in some circumstances, Bay Jr. provides average volume data, though not for a plurality of time periods each ending with the most recent trading session, and in some circumstances he does not even provide that.

With respect to the number of transactions, the applicant submits that Bay, Jr. does not disclose anywhere to use the average or standard deviation for the number of transactions. His only disclosed use of the number of transactions at all is to calculate the current trading volume; he never discloses to derive the average or standard deviation for the number of transactions.

Accordingly, of the six parameters that are included in step (e) of claim 1, namely the average price, the average volume, the average number of transactions, the standard deviation of the price, the standard deviation of the volume and the standard deviation of the number of transactions, the applicant submits that Bay Jr. does not disclose at least five of the six parameters, namely the averages of the price and the number of transactions and the standard deviation for any of the three parameters.

The Examiner did not cite Li as disclosing anything regarding the average or standard deviations of the price, volume and number of transactions. In any case, the applicant submits that Li does not disclose the use of any of the average or standard deviations of these values. The only reference to standard deviation made by Li is in respect of a 'Sharpe' ratio at column 5, lines 11-28, where the standard deviation of an entire portfolio's returns is the denominator of the said ratio. The standard deviation of any

particular commodity is not discussed nor suggested by Li. Furthermore, the standard deviation of each of the price, volume and number of transactions for each of a plurality of time periods, as claimed in step (e) of claim 1, is clearly neither discussed, nor suggested.

Thus, even in combination, Bay, Jr. and Li do not teach providing the average of the price, volume and number of transactions, nor the standard deviation of any of the price, volume and number of transactions for a selected financial instrument. Accordingly, the applicant submits that claim 1 is not obvious in view of the combined teachings of Bay, Jr. and Li.

The applicant submits further that, in spite of the applicant having presented arguments relating to the combined teachings of Li and Bay, Jr, there is no motivation to combine their teachings.

The applicant repeats and relies on the above argument made in respect of claim 1, for claims 2-7, which depend from claim 1, and for claim 21, which, like claim 1, includes steps wherein both the averages and standard deviations of the price, the volume and the number of transactions are incorporated into the method.

With respect to claim 8 and dependent claims 9-20, the applicant submits that, as indicated above, Bay, Jr. does not disclose the use of the average number of transactions, nor the average price. Furthermore, as indicated above, even though the Examiner did not cite Li as disclosing anything regarding the parameters claimed in claim 8, the applicant submits that Li does not mention the number of transactions at all in his patent. Accordingly, the applicant submits that even in combination, Bay, Jr. and Li do not teach to use the average number of transactions in a determination of whether aberrant behavior exists for a financial instrument.

Furthermore, as indicated above with respect to claim 1, the applicant submits that there is no motivation provided in Li and Bay, Jr. to combine the references.

The applicant has made several minor amendments to the claims to correct minor errors. For example, in claim 1, the term 'the price' in step (e) (formerly step (c)) has been changed to 'the closing price', since the antecedent basis for the term appears in element (b) as 'closing price'.

If the Examiner has any concerns, he is invited to contact the undersigned at 416-957-1679. The applicant respectfully submits that the application is in condition for allowance and early review and allowance are respectfully requested.

Respectfully submitted,

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